Instructor's Version

Answers: Free-Response Questions

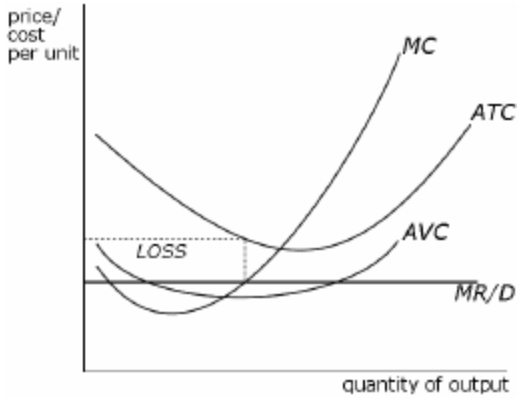
1. In the short run, a firm in any industry may continue to operate even if it's earning negative profits.

A. Explain the reasoning of a firm that operates in the short run even when its profits are negative. (6 points)

In the short run, a firm has fixed costs it must pay whether it produces or not. Therefore, the firm would like to earn revenue to defray those fixed costs, even if it cannot earn enough to entirely cover the fixed costs. The firm will operate if the price is greater than average variable cost.

the explanation is worth 6 points
3 points for defraying fixed costs
3 points for covering AVC

B. Show on a graph the cost and revenue curves of a firm in a perfectly competitive market that is operating at a loss in the short run. (7 points)



the demand, MR, and AR curves should be the same horizontal line on the graph.(2 points)
the firm will produce where MR = MC, which should be below ATC.(2 points)
since MC = ATC at its min, the firm is producing below that point.(2 points)
MC, AVC, and ATC curves should also be clearly labeled (1 point)

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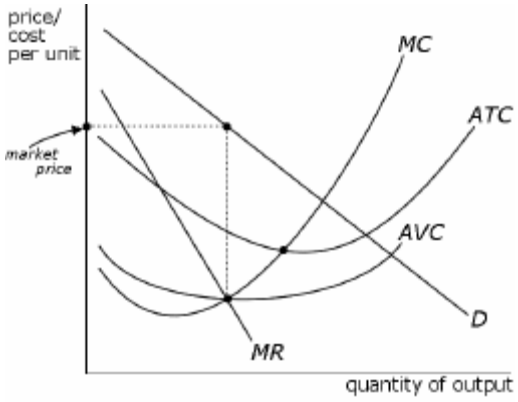
2. Explain in words and show on a graph how your answer in part (B) changes when the firm is in a monopolistically competitive market. (6 points)

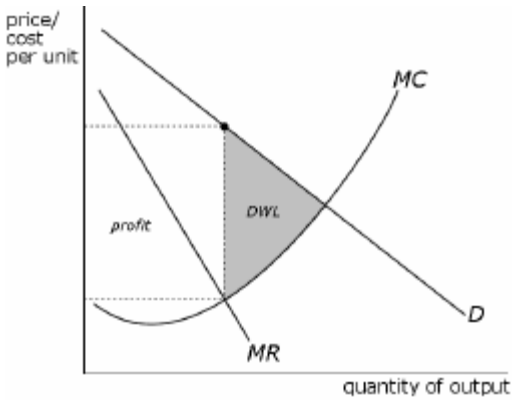


This graph should show downward sloping demand and MR curves, since a monopolistically competitive firm is a price searcher whereas a perfectly competitive is a price taker.

3 points for the graph *3 points for the verbal explanation*

3. Consider a hypothetical monopolist who faces a straight-line demand.

A. Draw the demand curve, marginal-revenue curve, and marginal-cost curve for the monopolist. Show the price and quantity the monopolist will choose, and show the deadweight or welfare loss. (7 points)



Set quantity where MR = MC, and find the price off the demand curve. The DWL is the shaded triangle to the left of the firm's output, but to the right of the point where demand and MC intersect. It's above the MC but below the demand curve.

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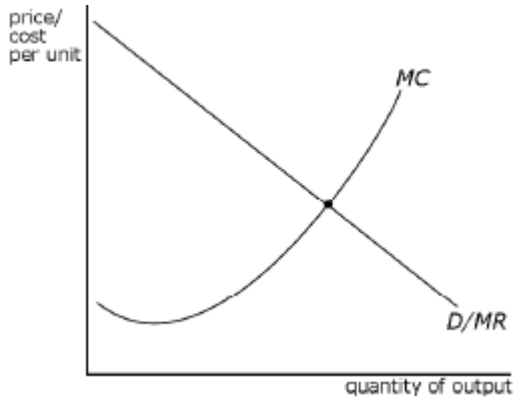
4 points for the graph with MR, MC, price and quantity
3 points for correctly shading DWL

B. On a new graph, show the same information, but with the monopolist engaging in price discrimination. (7 points)



MR = Demand now, so there's no DWL. The price is a series of prices.

3 points for getting DWL is gone
4 points for graph, showing MR = Demand

C. Explain in words the deadweight loss and if and why it changed when you went from question (A) to question (B). (6 points)

DWL is the inefficiency of price searching. It is created when the firm must charge everyone the same price. The firm chooses to produce less than the quantity that consumers value more than the cost of production, because to produce more, the firm would have to lower its price, and hence its revenues from all units. When the firm can sell to each what they are willing to pay, there is no DWL, and all the units that the consumer values more than the cost of production will be produced and sold.

4 points for correctly defining allocative inefficiency,
2 points for explanation of change in DWL

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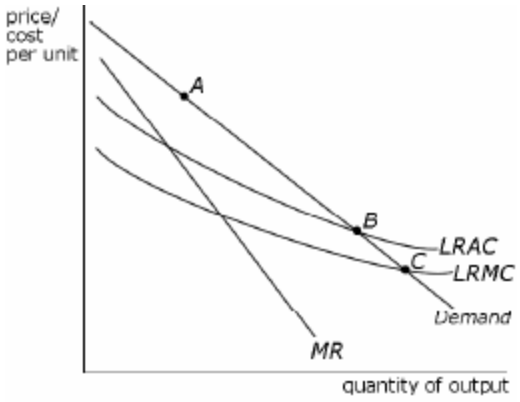
4. On a graph, show the cost and revenue curves for a natural monopoly. Explain in words why this monopolist can't maintain allocative efficiency for a long period of time. (6 points)



- A: Price of unregulated monopoly but allocative inefficiency.
- B: Price if regulated
- C: Marginal cost price is allocatively efficient but firm will lose money and have to go out of business.

  Since a natural monopoly has decreasing ATC over the whole range of production, the MC is less than ATC. If the firm produced where MC = Demand, hence allocative efficiency, then the firm would operate at a loss, and wouldn't be able to stay open for long.

3 points for the graph, *3 points for the verbal explanation*

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